Project Proposal

Security has become indispensable in today’s day and age and its need has only increased exponentially in the banking domain. A breach in security not only causes monetary losses but also affects the reputation of the bank. Hence, building a secure application has become highly essential. The retail banking sector catering to individual customers requires a robust and secure application to protect the bank as well as customers against security breaches. This application is similar to a retail banking application where customers are offered services like creation of accounts, financial advisors to buy bank products, loan services and mortgages. The retail bank has 3 branches located in Massachusetts. In order to secure the application the user account logins of employees and customers are made secure. The retail bank also consists of the cyber security department that filters the threats that occur within and those that can be routed out of the bank.

The actors in the application are:

1. Administrator: Shall create accounts of new customers and employees of the bank. Shall reset password when account is locked or when a user forgets a password.

2. Manager: Each department will have a manager. The Retail Bank department, Products department, Cyber Security Department and the Human Resource department has respective managers. The retail bank department manager and administrator will maintain all customer information. This is highly sensitive, hence only the administrator and the manager of the Retail Bank department will have access to this data.

3. Employee: Each department (The Retail Bank department, Products department, Cyber Security Department and the Human Resource department) will also have a department representative. The Retail Bank department will have a financial advisor. The financial advisor will be responsible to cater bank services to customers and advise them on the right products that need to be bought.

The various use cases are as follows:

1. The administrator must create customer and employee user accounts. He must also be able to reset accounts in case of locked accounts or forgot password case.
2. The Retail Bank department consists various services which are as below.
3. Request to create a check-in account or a savings account. If savings account is selected the customer will be benefitted by a return after every quarter. In case of a savings account the customer will be provided by an option of possessing a debit card.
4. The department also provides financial advisors to the customers. These representatives will provide advice on purchase of various products such as bonds, policies and request for transfer of funds.
5. The department provides mortgages on cars and homes. The mortgages provide the total amount based on the down payment provided by the customer. The bank also charges an interest annually.
6. The bank provides student loan services. Low interest rates could be provided based on loyalty.
7. The products department provides various products that the bank has to offer. It will report the popularity of the products amongst the customers as well.
8. The Cyber Security Department manages all files and requests that are routed outside the bank. It can access log files. It will also maintain a log of all user accounts accessed and can detect inter departmental accesses as well which is a prominent internal threat.
9. The human resource department has access to all the employee data within the bank.
10. In order to ensure that there is no illegal user access, the log in period of the user will be timed. Additionally he will be encountered with a security question each time he logs in.
11. After the three failed attempts to log in, the user account not only gets locked but the password and security question would need to be reset by the administrator.
12. To maintain high end security a code can also be generated that would require to be entered each time the user logs in. (The code will change after a specific period of time)
13. Since threats might be inevitable, they not only need to be prevented but also notified to other branches of the bank. Hence, any serious threat shall be notified to the other branches of the bank in order to remain vigilant.